

filed 7/25/03

ELECTRONIC INFORMATION DISCLOSURE STATEMENT

Electronic Version v18

Stylesheet Version v18.0

Title of Invention	SYSTEM AND METHOD OF ALTERING A VERY SMALL SURFACE AREA BY MULTIPLE CHANNEL PROBE						
Application Number :	10/604,486						
Confirmation Number:							
First Named Applicant:	Hendrik Hamann						
Attorney Docket Number:	FIS920020170US1						
Art Unit:	1765						
Examiner:	Alanko						
Search string:	(5865978 or 6002471 or 4880496 or 6078055).pn						
US Patent Documents							
Note: Applicant is not required to submit a paper copy of cited US Patent Documents							
Init	Cite.No.	Patent No.	Date	Patentee	Kind	Class	Subclass
✓	1	5865978	1999-02-02	Cohen		205	118
	2	6002471	1999-12-14	Quake		356	73
	3	4880496	1989-11-14	Nebenzahl, et al.		216	93
✓	4	6078055	2000-06-20	Bridger, et al.	669	250	492.2
Signature							
Examiner Name				Date			
<u>Hendrik Hamann</u>				6/20/05			

 <p>filed 8/14/03 AUG 14 2003 (Use several sheets if necessary)</p>		Docket Number (Optional) FIS920020170US1	Application Number 10/604,486
		Applicant(s) Hendrik F. Hamann et al.	
		Filing Date 07/25/2003	Group Art Unit 1765
*EXAMINER INITIAL <i>HGK</i> PATENT & TRADEMARK OFFICE			
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)			
<p>A Nanoplotter with Both Parallel and Serial Writing Capabilities, Seunghun Hong and Chad A. Mirkin, Science Magazine, Vol. 288, June 9, 2000, pp 1808 - 1811.</p>			
<p>New Fields for STMs, Jim Gimzewski, IBM Zurich Research Lab</p>			
<p>Nanonics Co., Near-Field Optical Products (Probes), 8/15/2001 http://www.nanonics.co.il/cont/probes.html.</p>			
<p>Probe Specifications, Cantilevered/Straight NSOM Optical Fiber for Simultaneous Normal Force AFM and NSOM; http://www.nanonics.co.il/cont/tip_specs.html.</p>			
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<p>The NSOM-100 A Multifunctional Near-Field Optical Scanned Probe Confocal Microscope, www.nanonics.co.il</p>			
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<p>Direct Pattern Writing by Local heating in a Scanning Tunneling Microscope, M. Liehr et al. Y08850624, IBM Technical Disclosure Bulletin, Vol. 29, No. 6, 11/1986, pp 2680 - 2681.</p>			
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<p>Self-Assembly of Ink Molecules in Dip-Pen Nanolithography: A Diffusion Model, Joonkyung Jang et al., Journal of Chemical Physics, Vol. 115, No. 6, 8/8/2001, pp 2721 - 2729.</p>			
EXAMINER <i>Anita Hamano</i>		DATE CONSIDERED <i>6/20/05</i>	
*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.			

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*EXAMINER INITIAL	OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)		
<i>A. Ked</i>	Dip-Pen Nanolithography on Semiconductor Surfaces, Alibena Ivanisevic et al., J. Am. Chem. Soc. 2001, 123, 7887-7889. Multiple Ink Nanolithography: Toward a Multiple-Pen Nano-Plotter, Seunghun Hong et al., Science Magazine, Vol. 286, 10/15/1999, pp 523 - 525. Dip-Pen Nanolithography, Richard D. Piner et al., Science Magazine, Vol. 283, 01/29/1999, pp 661 - 663. Surface Science and Dip-Pen Nanolithography, Dr. Shouwu Gou et al., 07/08/2002. Progress on Nanostructuring with Nanojet, Jens Voigtmann et al., paper #85, P-9-4, 2000. Research Shows Potential of Nanojets for Smaller Circuitry & Injecting Genes, Science Daily Magazine, 08/31/2000. Progress on Nanostructuring with Nanojet, J. Voigt., 11/1999, pp 151 - 152. Investigating Material and Functional Properties of Static Random Access Memories Using Cantilevered GlassMultiple-Wire Force-Sensing Thermal Probes, Rima Dekhter et al. Applied Physics Letters, Vol. 77, No. 26, 12/15/2000, pp 4425 - 4427 Near-Field Scanning Optical, Atomic Force, Scanning Resistance and UV Confocal Microscopy in the Failure Analysis of ULSIs Produced with the Most Advanced Sub-Quarter Micron Design Rules, Aaron Lewis, et al., Div. of Applied Physics, The Hebrew University of Jerusalem, Israel. Failure Analysis of Integrated Circuits Beyond the Diffraction Limit: Contact Mode Near-Field Scanning Optical Microscopy with Integrated Resistance, Capacitance, and UV Confocal Imaging, Aaron Lewis et al., Proceedings of the IEEE, Vol. 88, No. 9, Sept. 2000. Fountain Pen Nanochemistry: Metallic Nano-etching and Nanolithography, Aaron Lewis, Div. of Applied Physics. The Hebrew University of Jerusalem, Israel. Fountain Pen Nanochemistry: Atomic Force Control of Chrome Etching, Aaron Lewis, Applied Physics Letters, Vol. 75, No. 17, 10/25/1999, pp 2669 - 2691.		
EXAMINER	<i>Andrea Flanck</i>	DATE CONSIDERED <i>6/20/05</i>	

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EXAMINER INITIALS	<i>AUS</i>	OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)	
<p><i>OIE 1203</i></p> <p>PATENT 1998 SRC Annual Review, Near-Field Optics for Metrology and Lithography, Research ID 438, Robert Grober, Dept. of Applied Physics, Yale University.</p>			
<p>Maskless Lithography Using Scanning Probes, Kathryn Sara Wilder, GL report No. 5670, Edward L. Ginzton Lab., Stanford University, August 1999.</p>			
<p>Fabrication of Nanometer Scale Structures, Munir H. Nayfeh, Dept. of Physics, University of Illinois at Urbana-Champaign, Illinois. Tech. of Proximal Probe Lithography, 1993, pp. 200-217</p>			
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<p>Technology of Proximal Probe Lithography, Christie R.K. Marrian, Naval Research Laboratory, SPIE Institutes, Volume 1510, 1993, pp 268-288, <i>editor</i>, 127-158, 188-199, 200-217</p>			
EXAMINER <i>Julia Mankos</i>		DATE CONSIDERED <i>6/20/05</i>	
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